Gen. Lib.
GIFT
MRS. C. W. PATTERSON
10-16-1931

CONTENTS OF VOLUME X

L. JANUARY, 1900

PAGE

A Determination of the Nature of the Electric and Magnetic Qualities and of the Density and Elasticity of the Ether. I. R. A. FESSENDEN. 1

Polarization and Internal Resistance of the Copper Voltameter. B. E. MOORE 34

A New Method of Comparing Two Self-Inductances. H. V. CARPENTER . . 52

New Books: *Wüllner:* Lehrbuch der Experimental Physik; *Ostwald's* Klassiker der Exakten Wissenschaften, Nos. 99 and 100; *Lengfeld:* Inorganic Chemical Preparations; *Hillyer:* Laboratory Manual 63

LI. FEBRUARY, 1900

The Influence of Electrification on the Surface Tension of Water and Mercury. ERNEST MERRITT and SAMUEL J. BARNETT 65

An Objective Representation of the Hysteresis of Iron and Steel. KNUT ÅNGSTRÖM 74

A Determination of the Nature of the Electric and Magnetic Quantities and of the Density and Elasticity of the Ether. II. REGINALD A. FESSENDEN. . 83

Thermodynamic Notes (No. 10); Revision of Some Thermal Data Concerning Benzene. K. TSURUTA 116

An Efficient Boyle's-Law Apparatus. W. J. HUMPHREYS 123

New Books: *Scheiner:* Strahlung und Temperatur der Sonne; *Gerland und Traumüller:* Geschichte der Physikalischen Experimentierkunst 126

LII. MARCH, 1900

On the Metabolism of Matter in the Living Body. EDWARD B. ROSA 129

A Dissociation Theory of the Electric Arc. C. D. CHILD 151

The Effect of Magnetization on the Elasticity of Rods. II. JAMES S. STEVENS 161

The Influence of Temperature, Pressure, Used Solutions, and Size of Anodes on the Deposit of Silver Voltameters. J. F. MERRILL 167

A Lecture Demonstration in Wave Motion. WILL. C. BAKER 175

An Apparatus for the Determination of the Coefficient of Expansion of Air at Constant Pressure. C. F. ADAMS 178

On the Change in Length of Soft Iron in an Alternating Magnetic Field. LOUIS W. AUSTIN 180

New Books: *Wentworth and Hill:* Text-book of Physics; *Franklin and Williamson:* Alternating Currents; *Aimé:* De l'influence de la pression sur les actions Chimiques; *Duhem:* Mechanique Chimique; *Miller:* American Telephone Practice 187

LIII. APRIL, 1900

The Acoustic Analysis of the Vowels from the Phonographic Record. LOUIS BEVIER, JR. 193
Note on the Variation of the Specific Heat of Water Between 0° and 100° C. H. L. CALLENDAR and H. T. BARNES 202
The Magnetic Molecular Susceptibility of Salts of the Iron Group. O. LIEBKNECHT and A. P. WILLS 215
Gibbs' Thermodynamic Model. W. P. BOYNTON 228
On the Temperature of the Acetylene Flame. EDWARD L. NICHOLS . . 234
Note on the Law of Distribution of Velocities Among Gas Molecules. N. D. C. HODGES 253
New Books: *Crew:* Elements of Physics; *Watson:* Text-Book of Physics . . 254

LIV. MAY–JUNE, 1900

The Transmission of the Ionized Exhalations of Phosphorus Through Air and Other Media. C. BARUS 257
An Hermetically Sealed Type of Clark Standard Cell. H. T. BARNES . . . 268
Concerning Thermal Conductivity in Iron. EDWIN H. HALL 277
Spark-Length of an Electric Influence Machine as Modified by a Small Spark from the Negative Side. W. J. HUMPHREYS 311
Index 317